

Installing iputils-ping in the container using apt

```
root@23abdc83e23f: /
PS C:\WINDOWS\system32> docker images
REPOSITORY    TAG       IMAGE ID       CREATED        SIZE
ubuntu        16.04     aefd7f02ae24   2 weeks ago    134MB
PS C:\WINDOWS\system32> docker run -it ubuntu:16.04 /bin/bash
root@23abdc83e23f:/# ping google.com
bash: ping: command not found
root@23abdc83e23f:/# apt-get update
Get:1 http://security.ubuntu.com/ubuntu xenial-security InRelease [109 kB]
Get:2 http://security.ubuntu.com/ubuntu xenial-security/main amd64 Packages [2049 kB]
Get:3 http://archive.ubuntu.com/ubuntu xenial InRelease [247 kB]
Get:4 http://security.ubuntu.com/ubuntu xenial-security/restricted amd64 Packages [15.9 kB]
Get:5 http://archive.ubuntu.com/ubuntu xenial-updates InRelease [109 kB]
Get:6 http://security.ubuntu.com/ubuntu xenial-security/universe amd64 Packages [985 kB]
Get:7 http://archive.ubuntu.com/ubuntu xenial-backports InRelease [107 kB]
Get:8 http://archive.ubuntu.com/ubuntu xenial/main amd64 Packages [1558 kB]
Get:9 http://security.ubuntu.com/ubuntu xenial-security/multiverse amd64 Packages [8820 B]
Get:10 http://archive.ubuntu.com/ubuntu xenial/restricted amd64 Packages [14.1 kB]
Get:11 http://archive.ubuntu.com/ubuntu xenial/universe amd64 Packages [9827 kB]
Get:12 http://archive.ubuntu.com/ubuntu xenial/multiverse amd64 Packages [176 kB]
Get:13 http://archive.ubuntu.com/ubuntu xenial-updates/main amd64 Packages [2559 kB]
Get:14 http://archive.ubuntu.com/ubuntu xenial-updates/restricted amd64 Packages [16.4 kB]
Get:15 http://archive.ubuntu.com/ubuntu xenial-updates/universe amd64 Packages [1544 kB]
Get:16 http://archive.ubuntu.com/ubuntu xenial-updates/multiverse amd64 Packages [26.2 kB]
Get:17 http://archive.ubuntu.com/ubuntu xenial-backports/main amd64 Packages [10.9 kB]
Get:18 http://archive.ubuntu.com/ubuntu xenial-backports/universe amd64 Packages [12.6 kB]
Fetched 19.4 MB in 3min 8s (103 kB/s)
Reading package lists... Done
root@23abdc83e23f:/# apt-get install iputils-ping
Reading package lists... Done
Building dependency tree
```

ping usage

```
root@23abdc83e23f: /
root@23abdc83e23f:/# ping google.com
PING google.com (142.250.204.46) 56(84) bytes of data:
64 bytes from 142.250.204.46: icmp_seq=1 ttl=37 time=45.8 ms
64 bytes from 142.250.204.46: icmp_seq=2 ttl=37 time=31.2 ms
64 bytes from 142.250.204.46: icmp_seq=3 ttl=37 time=30.0 ms
64 bytes from 142.250.204.46: icmp_seq=4 ttl=37 time=29.5 ms
^C
--- google.com ping statistics ---
4 packets transmitted, 4 received, 0% packet loss, time 3004ms
rtt min/avg/max/mdev = 29.510/34.144/45.848/6.785 ms
root@23abdc83e23f:/#
```

“Copying” the current container state as a new image

```
root@6a94830cffbd: /
PS C:\WINDOWS\system32> docker commit --help

Usage: docker commit [OPTIONS] CONTAINER [REPOSITORY[:TAG]]

Create a new image from a container's changes

Options:
  -a, --author string      Author (e.g., "John Hannibal Smith
                           <hannibal@a-team.com>")
  -c, --change list        Apply Dockerfile instruction to the created image
  -m, --message string     Commit message
  -p, --pause              Pause container during commit (default true)
PS C:\WINDOWS\system32> docker commit -a 'Ace Belen' -m 'added ping utility' 23a blueaxis/ping
sha256:d668f07251a37c4ea8a947832947d1fcf3abd99ef6ead72afc0ecc58431d91cc
PS C:\WINDOWS\system32> docker images
REPOSITORY      TAG         IMAGE ID      CREATED       SIZE
blueaxis/ping    latest      d668f07251a3  7 seconds ago 169MB
ubuntu          16.04      ae7d7f02ae24  2 weeks ago  134MB
PS C:\WINDOWS\system32> docker run -it --rm blueaxis/ping /bin/bash
root@6a94830cffbd:/# ping google.com
PING google.com (142.250.204.46) 56(84) bytes of data.
64 bytes from 142.250.204.46: icmp_seq=1 ttl=37 time=26.9 ms
64 bytes from 142.250.204.46: icmp_seq=2 ttl=37 time=33.1 ms
64 bytes from 142.250.204.46: icmp_seq=3 ttl=37 time=30.6 ms
^C
--- google.com ping statistics ---
3 packets transmitted, 3 received, 0% packet loss, time 2003ms
rtt min/avg/max/mdev = 26.961/30.248/33.134/2.544 ms
root@6a94830cffbd:/#
```